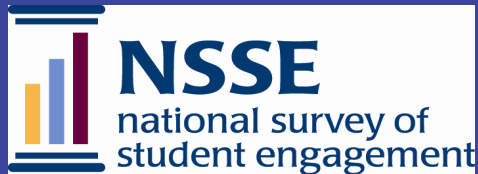


Using Student Engagement Data to Inform Decisions



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Integrating Analytics Forum -- November 10, 2019

Higher Education Data Analytics Framework

CULTURE

- How might leaders create a culture that values data-informed decisions?
- How can business officers empower staff across the institution?
- In what ways might business officers collaborate across the institution?

CONTINUOUS CHECK IN

- ✓ Does my institution support a data-informed culture?
- ✓ Is everyone on campus empowered to use data?

HINDSIGHT

What happened?

Why did it happen?



INSIGHT

What is happening today?

Should we act on this information?



FORESIGHT

What might happen?

How can we achieve better outcomes?



RETURN ON INVESTMENT

What are the outcomes?

How has data improved our processes and outcomes?



CAPACITY

- What tools do we need to facilitate a data-informed culture?
- What skills do our staff need?
- Do we have the necessary data?

CONTINUOUS CHECK IN

- ✓ Does my institution have the human resources needed?
- ✓ Does my institution have the technology to support data analytics?

**How does data about
your undergraduate
students' experiences
help you be smarter
about student success?**



Susan Whealler Johnston,
NACUBO Pres/CEO



Learning Objectives

- **Gain awareness about student engagement and NSSE as a measure of educational quality in a data-informed culture**
- **Describe an effective step in building an interactive data system**
- **Identify an effective strategy or two to promoting campus use of data**





- Ask students about their experiences & behaviors
- Diagnostic information to support the improvement of undergraduate education

The screenshot displays a mobile app interface for the NSSE survey. The top status bar shows the time as 10:48, 10:50, and 10:51 across different frames. The app's navigation menu on the left includes options like 'Faculty', 'Student', 'Pre-assessment', 'Other additional (registration)', 'Contact Us', and 'Frequently Asked Questions'. The main content area shows a question: 'Which of the following best describes your sexual orientation?'. The options are: 'Straight (heterosexual)', 'Bisexual', 'Gay', 'Lesbian', 'Queer', 'Questioning or unsure', 'Another sexual orientation, please specify:' (with a text input field), and 'I prefer not to respond'. A 'Continue' button is located at the bottom right of the question area. The bottom of the screen shows the Android navigation bar.

https://survey.indiana.edu/nsse_demo/login.cfm



- **1,654 4-year institutions**
- **20% have 10+ admins**



Assertion about NSSE data and decision-making

Many institutions use NSSE data to monitor and document effectiveness

- assessment
- accreditation
- benchmarking
- strategic planning
- quality improvement
- faculty development



<http://nsse.indiana.edu/>

Assertion about NSSE data and decision-making

Many institutions use NSSE data to monitor and document effectiveness

- assessment
- accreditation
- benchmarking
- strategic planning
- quality improvement
- faculty development



Too few regularly use their results to make data-informed decisions



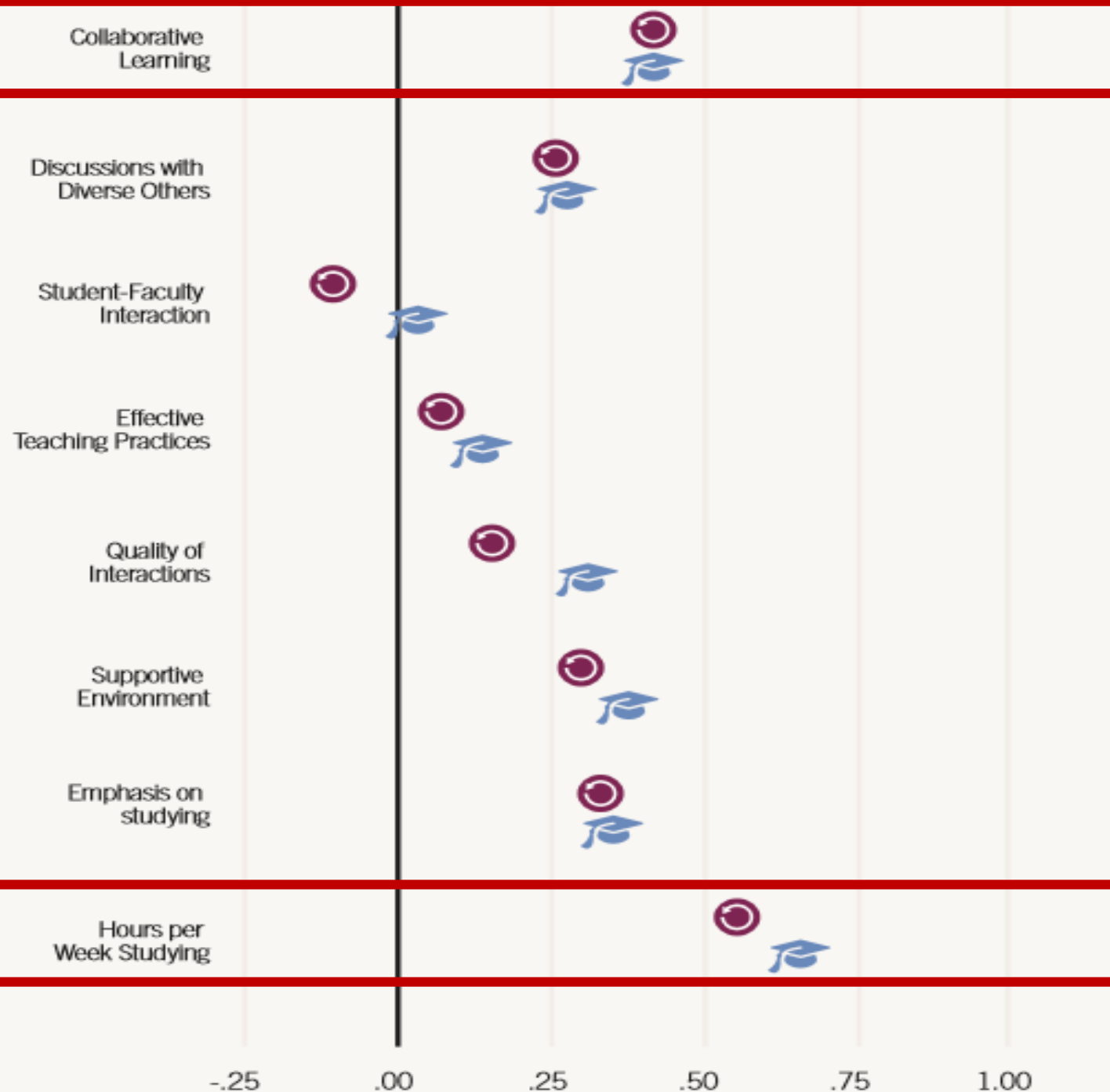
NSSE's value for decision-making

Student Engagement, Persistence & Graduation



Connected

First-year Student Engagement Correlations with Institutional Retention & Graduation Rates



Correlation with Retention Rate



Correlation with Graduation Rate

NSSE Data Inform Strategic Decisions: Advising Model

- Eastern's NSSE results and student comments made the problem clear
- Shared data with every academic department

“Only by listening to student voices can colleges and universities ensure that the changes we make improve educational outcomes.”



Using NSSE Data in Strategic Decision Making for Advising

EASTERN CONNECTICUT
STATE UNIVERSITY

Far from taking
advising away from
faculty, Eastern's
new advising
model—based on
both quantitative and
qualitative data from
NSSE—supported the

Dr. Elsa Núñez arrived as new president at Eastern Connecticut State University in 2006 with a reputation as a proponent of strategic planning and data-driven decision making. Within a year, more than 300 faculty and staff were hard at work crafting the first five-year strategic plan of her presidency. (As of this printing, the university is in the third planning cycle of the Núñez administration.)

One of the most important elements of Eastern's

depends on to serve students and to help them
persist on their path to academic success.

NSSE results can help identify what to enhance to create a more engaging experience

What to do if your NSSE data showed...

- **Just 50% of FY students “frequently” worked with peers on course projects or assignments**
- **Only 64% of Seniors had done a High-Impact Practice (HIP) vs. 75% at comparison schools**
- **“Discussion with Diverse Others” scores declined despite investments in equity & inclusion efforts**



NSSE at Stetson

- About Stetson
- Participated 6 times since 2005
- For the first 3, presentations of results were made to campus
 - [2006 presentation](#)
 - [2008 presentation](#)
 - [2010 presentation](#)
- Executive summaries, comparison reports, and multi-year benchmark reports made available on website



NSSE at Stetson: 2012-2017

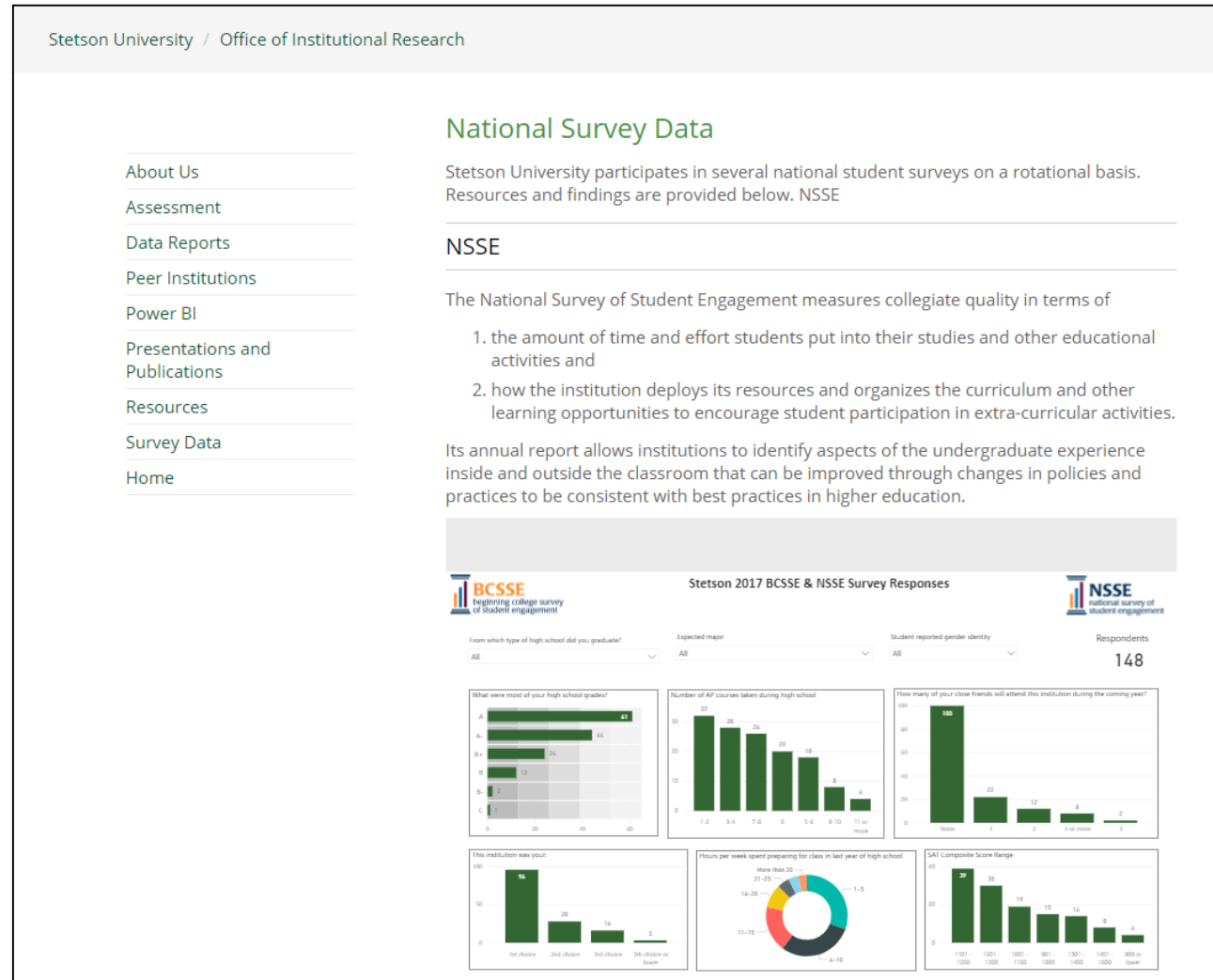


Challenges to ensuring use

- **Awareness**
 - Campus stakeholders are not well versed in the NSSE cycle, even when in the middle of data collection
 - Stakeholders are not aware of the extent of data available
 - Only seek the data when searching for something to answer a specific question or need
- **Turn over in key data user positions**
 - Deans and Department Chairs are more frequent users, but there is much turn over

NSSE at Stetson: 2017

- 2017 started developing Power BI dashboard to communicate and understand results
- Dashboard published to IR website for public access



Dashboard Development

- Started with raw NSSE data files
- Much data preparation and parsing due to varying response choices (i.e., a table containing all questions that use an agreement scale)

During the coming school year, about how often do you expect to do each of the following?

student ID	Ask another student to help you understand course material	Explain course material to one or more students	Prepare for exams by discussing or working through course material with	Work with other students on course projects or assignments	Talk about career plans with a faculty member	Work with a faculty member on activities other than coursework (committee	Discuss your academic performance with a faculty member	Discuss course topics, ideas, or concepts with a faculty member outside of	Prepare two or more drafts of a paper or assignment before turning it in	Come to class without completing readings or assignments
1	Very often	Very often	Very often	Very often	Very often	Very often	Very often	Very often	Very often	Never
2	Very often	Very often	Often	Often	Sometimes	Sometimes	Sometimes	Sometimes	Often	Never
3	Sometimes	Often	Often	Often	Very often	Very often	Very often	Very often	Often	Sometimes
4	Often	Very often	Often	Often	Sometimes	Sometimes	Often	Often	Very often	Never
5	Sometimes	Sometimes	Often	Often	Often	Often	Sometimes	Often	Often	Never
6	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Never
7	Sometimes	Very often	Sometimes	Very often	Very often	Often	Often	Often	Sometimes	Never
8	Often	Often	Sometimes	Often	Sometimes	Sometimes	Sometimes	Sometimes	Often	Never
9	Very often	Often	Very often	Very often	Sometimes	Never	Sometimes	Never	Very often	Sometimes
10	Often	Sometimes	Often	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Often	Never

Dashboard Development

Imported data tables into Power BI where they were transformed for use

Original imported data

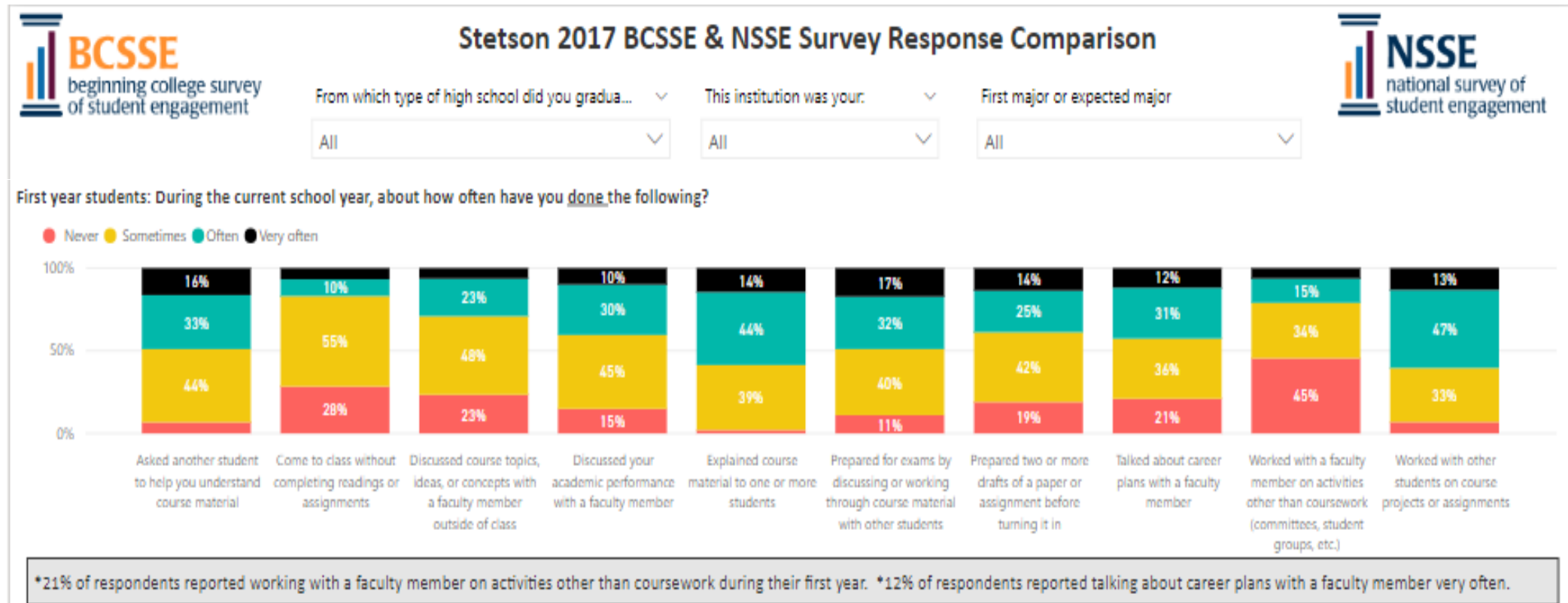
	A ^B _C Please print (enter) y...	A ^B _C Ask another student to...	A ^B _C Explain course mater...	A ^B _C Prepare for exams by...
1	800626884	Very often	Very often	Very often
2	800621985	Very often	Very often	Often
3	800-62-9664	Sometimes	Often	Often
4	800633508	Often	Very often	Often
5	800150706	Sometimes	Sometimes	Often
6	800148976	Sometimes	Sometimes	Sometimes
7	800628723	Sometimes	Very often	Sometimes
8	800149869	Often	Often	Sometimes
9	800625545	Very often	Often	Very often
10	800148751	Often	Sometimes	Often
11	800627935	Very often	Very often	Very often
12	800148951	Sometimes	Often	Often
13	800622980	Sometimes	Often	Sometimes
14	800626483	Sometimes	Sometimes	Sometimes
15	800630366	Sometimes	Sometimes	Often
16	800640035	Sometimes	Sometimes	Often
17	800629920	Very often	Very often	Very often
18	800-63-2547	Very often	Often	Sometimes
19	800147948	Often	Sometimes	Often
20	800630126	Often	Often	Often
21	800148368	Sometimes	Often	Very often
22	800643827	Often	Very often	Very often
23	800-62-7679	Very often	Sometimes	Very often
24	800617171	Sometimes	Sometimes	Often
25	800622841	Sometimes	Very often	Often
26	800-62-5669	Very often	Often	Often
27	800150150	Very often	Often	Often

Unpivoted imported data

	A ^B _C Please print (enter) y...	A ^B _C Attribute	A ^B _C Value
1	800626884	Ask another student to help you understand course material	Very often
2	800626884	Explain course material to one or more students	Very often
3	800626884	Prepare for exams by discussing or working through course material ...	Very often
4	800626884	Work with other students on course projects or assignments	Very often
5	800626884	Talk about career plans with a faculty member	Very often
6	800626884	Work with a faculty member on activities other than coursework (co...	Very often
7	800626884	Discuss your academic performance with a faculty member	Very often
8	800626884	Discuss course topics, ideas, or concepts with a faculty member outsi...	Very often
9	800626884	Prepare two or more drafts of a paper or assignment before turning it...	Very often
10	800626884	Come to class without completing readings or assignments	Never
11	800621985	Ask another student to help you understand course material	Very often
12	800621985	Explain course material to one or more students	Very often
13	800621985	Prepare for exams by discussing or working through course material ...	Often
14	800621985	Work with other students on course projects or assignments	Often
15	800621985	Talk about career plans with a faculty member	Sometimes
16	800621985	Work with a faculty member on activities other than coursework (co...	Sometimes
17	800621985	Discuss your academic performance with a faculty member	Sometimes
18	800621985	Discuss course topics, ideas, or concepts with a faculty member outsi...	Sometimes
19	800621985	Prepare two or more drafts of a paper or assignment before turning it...	Often
20	800621985	Come to class without completing readings or assignments	Never
21	800-62-9664	Ask another student to help you understand course material	Sometimes
22	800-62-9664	Explain course material to one or more students	Often
23	800-62-9664	Prepare for exams by discussing or working through course material ...	Often
24	800-62-9664	Work with other students on course projects or assignments	Often
25	800-62-9664	Talk about career plans with a faculty member	Very often
26	800-62-9664	Work with a faculty member on activities other than coursework (co...	Very often
27	800-62-9664	Discuss your academic performance with a faculty member	Very often

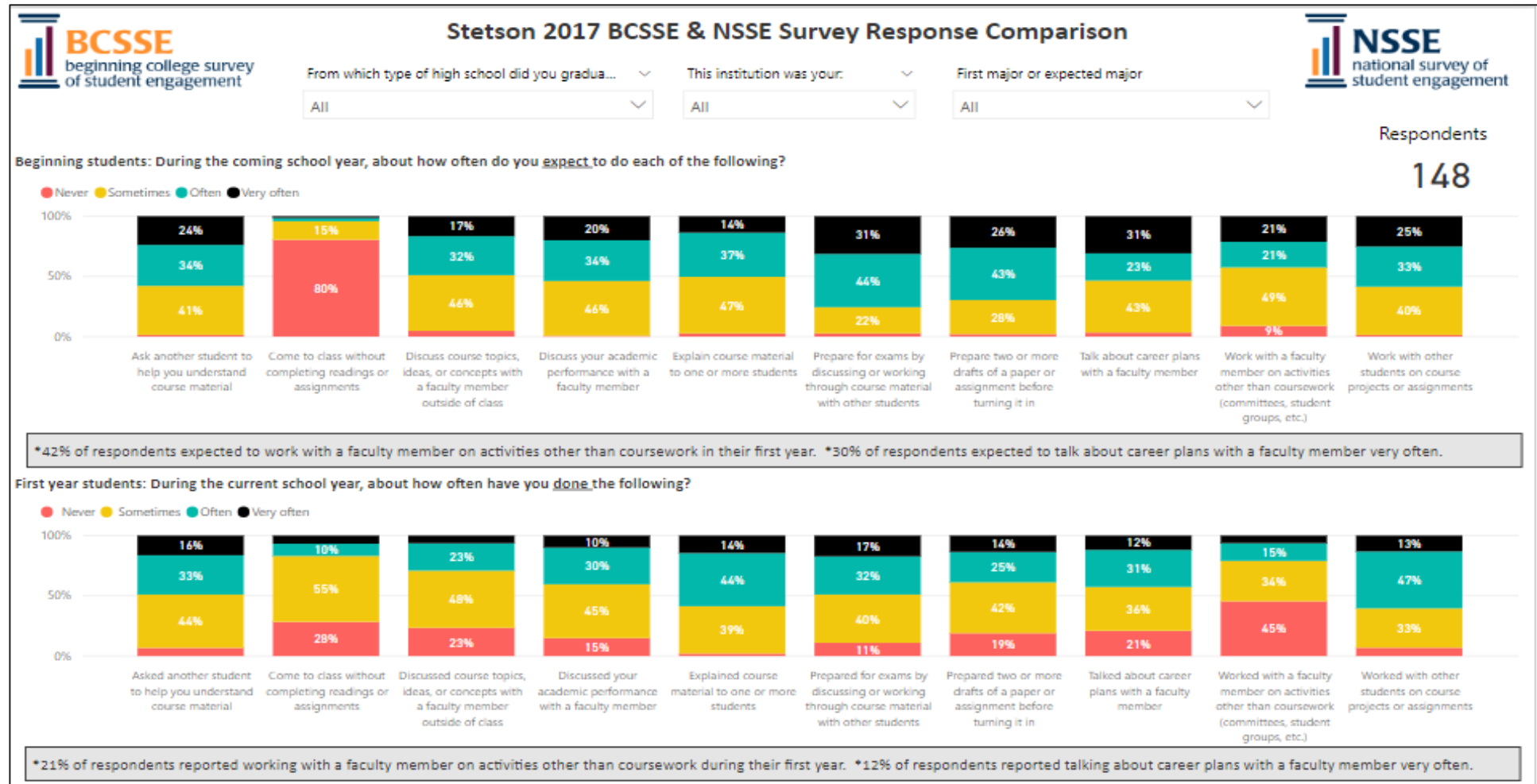
Dashboard Development

Once data is unpivoted, it can be used in aggregate visualizations



Dashboard Demo

Quick demo of dashboard



Empowering and engaging audiences

- **Dashboard posted on our website to encourage use by a wide variety of campus stakeholders, including:**
 - **Administrators**
 - **Faculty**
 - **Staff**
 - **Students**
 - **Prospective students/parents**

NSSE & Retention

Responses found to be indicators of lower than average retention

- Not important to me to graduate from this institution (-53% lower than institutional average)
- Considered leaving because of relations with faculty and staff (-28%)
- Definitely would not attend the same institution you are now attending if could start over (-23%)
- Considered leaving to change career options (-21%)
- Very little support environment provided by institution for gender identity (-21%)
- Never examined the strengths and weaknesses of your own views on a topic or issue (-18%)
- Very little - Instructors clearly explained course goals & requirements (-16%)
- Interacting with faculty has been difficult (-15%)

BCSSE & Retention

Responses found to be indicators of lower than average retention

- Uncertain if I expect to graduate from this institution (-28% lower)
- Do not know what their major will be (-14%)
- During your last year of high school, on average, how many hours per week did you spend preparing for class (studying, reading, doing homework, etc.)?

Hours per week (average)	Retained	Difference from institutional retention
0	60%	-18%
1-5	73%	-5%
6-10	76%	-2%
11-15	83%	4%
16-20	82%	3%
21-25	89%	10%
26-30	91%	13%
More than 30	80%	2%

Budget and operational implications

- Budget officers gain a greater understanding of student insights that impact the bottom line
- Data provide a direct linkage to student voice/experience often missing from budgetary considerations
- Data serve as indicators for targeted early interventions with the potential to affect the economic impact of attrition
 - Enrollment tuition driven institution...Each additional student retained through graduation \$80,000 additional net revenue

Other budget and operational uses

- **Data used for:**
 - **Grant proposals (Sponsored Research department)**
 - **Programmatic self-studies (Religious Studies, Sociology, etc.)**
 - **Accreditation**
 - **Reports (SACSCOC and AACSB)**
 - **QEP selection and evaluation**

Tips for promoting data use

- Develop a question summary sheet for quick reference
- Create a 1 page infographic to share key data findings that may have budgetary implications, such as:
 - How would you evaluate your entire educational experience at this institution?
 - Do you intend to return to this institution next year?
 - If you could start over again, would you go to the same institution you are now attending?
 - Indicate the quality of your interactions with the following people (students/advisors/faculty/staff) at your institution.
- Participate in topical modules to gain additional insights
 - First-Year Experiences and Senior Transitions: During the current school year, have you seriously considered leaving this institution?

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